PATENT
Attorney Docket No. 049128-5018

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	)	Confirmation No. 9570
Hyeon Ho SON, *et al.*	)	
Application No.: 09/893,676	)	Group Art Unit: 2629
Filed: June 29, 2001	)	Examiner: J. Nguyen
For: METHOD OF DRIVING LIQUID CRYSTAL DISPLAY	)	

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REPLY BRIEF UNDER 37 C.F.R. §41.41

This Reply Brief is in response to the Examiner's Answer dated August 25, 2006, the period for filing this Reply Brief extending through October 25, 2006. Hence, Appellants submit that this Reply Brief has been filed timely for consideration.

Appellants' Response

Appellants note that the "grounds of rejection" set forth in the Examiner's Answer issued on August 25, 2006 are not that of those advanced in the final Office Action. In particular, the following allegation was never set forth in the final Office Action issued on November 1, 2005:

> applying common voltage (common voltage value between Vcom high and Vcom low from one subframe to a next subframe) to the plurality of liquid crystal cells after applying the one of the Vcom high and the Vcom low (col. 10, line 66 to col. 11, line 22). (ExAns: page 3, section 2, paragraph 4.)

Moreover, the rejection was changed in the Examiner's Answer from the final Office Action in the following manner:

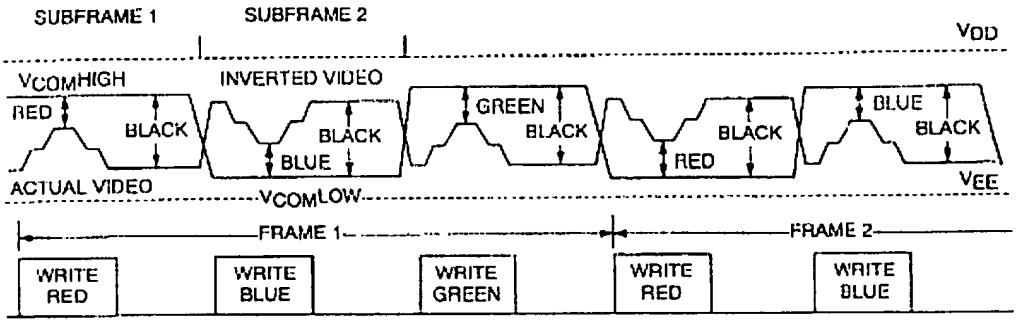
> Zavracky differs from claims 1 and 13 in that he does not specifically teaches [sic] applying the ~~reference~~ common voltage value between Vcom high and Vcom low is a reference common voltage ~~to the plurality of liquid crystal cells after applying the one of the high level common voltage and low level common voltage~~. (ExAns: p. 4, ll. 1-2.)

Appellants note that the after-final amendment only corrected typographical errors. Hence, the added grounds of rejection were not warranted. Nevertheless, in an effort to advance the appeal process, Appellants address the added grounds of rejection in addition to the remarks made in the Examiner's Answer.

Appellants assert Zavracky et al. and Sugawara et al. both fail to teach or even suggest all the features of the independent claims 1 and 13. It appears that the added grounds of rejection indicated above is an attempt to improperly retract the admissions made in prior Office Actions. (*See, e.g.,* FOA(11/1/05): p. 2, sec. 3, para. 5; OA (3/22/05): p. 2, sec. 3, para. 3.) By re-crafting the prior admissions in the manner presented in the Examiner's Answer, the Office is attempting

now to justify the new allegation the "reference common voltage" recited at least in independent claims 1 and 13 as "any Vcom value [that] differs from Vcom high and Vcom low." (ExAns: p. 6, ll.12-13.) Appellants note that no such allegations were made in any of the Office Actions in the record. While Appellants assert that these statements are improper and should not be raised in an Examiner's Answer, Appellants assert that even if a "reference common voltage" can be any Vcom value, *in arguendo*, Zavracky et al. and Sugawara et al., whether taken individually or in combination, still fail to teach or suggest every feature of at least independent claims 1 and 13.

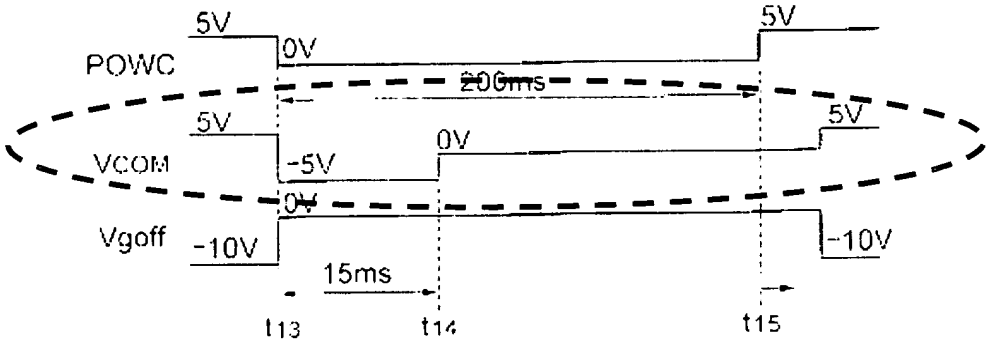
As explained in the prior responses and in the Appellants' Brief, Zavracky et al. and Sugawara et al. both fail to teach at least the step of "applying a reference common voltage to the plurality of liquid crystal cells after applying the one of the high-level common voltage and the low-level common voltage" as recited, in part, in claim 1 and the step of "applying a reference common voltage to the plurality of the liquid crystal cells after the allowing of the liquid crystal cells to respond" as recited, in part, in claim 13. As exemplyfied in FIG. 12B of Zavracky et al. as reproduced in part below, Zavracky et al. only teaches applying a Vcom HIGH and Vcom LOW in a uniformly alternating fashion for each color.



Zavracky et al. is silent as to applying any other voltage after the Vcom HIGH and Vcom LOW signal. Sugawara et al. does not cure these deficiencies.

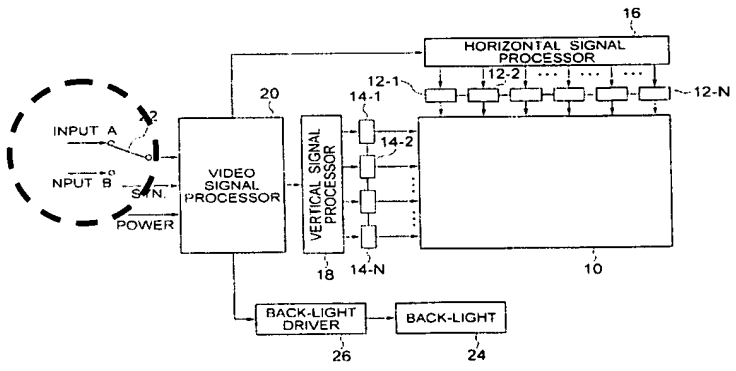
As explained in prior responses and the Appellants' Brief, the "zero" value of the Vcom line, as shown in FIG. 9 of Sugawara et al. reproduced below for convenience, is not a "reference common voltage." Rather, it is an ***absence*** of voltage during the switching between display modes.

FIG. 9



In other words, the "zero" value occurs on the Vcom line when the switch 22 between "Input A" and "Input B" to select the input source to the video signal processor 20 changes position as shown in FIG. 5 of Sugawara et al., reproduced below.

FIG. 5



While this absence of voltage (i.e., Vcom=0) is not a "reference common voltage," even if, *in arguendo*, any voltage that is not a high common voltage or a low common voltage is construed as a reference voltage as alleged in the Examiner's Answer, Sugawara et al. fails to teach or even suggest that the Vcom=0 is applied "after applying the one of the high-level common voltage and the low-level common voltage" (claim 1) or "after the allowing of the liquid crystal cells to respond" (claim 13).

As explained above and in previous responses, Vcom=0 in Sugawara et al. occurs when the display mode is switched from one mode to another (e.g., SXGA to VGA). Sugawara et al. is silent as to when the display mode is switched. FIG. 9 of Sugawara et al., at best, shows that the application of Vcom=-5V was ***interrupted*** when the display mode switched (*i.e.,* Vcom=0 only indicates that the ±5Vcom becomes 0V when the switch changes position). Sugawara et al. fails to teach or even suggest that the Vcom=0 is applied ***after*** applying the one of the high-level common voltage and the low-level common voltage" (claim 1) or ***after*** the allowing of the liquid crystal cells to respond (claim 13).

In addition, Sugawara et al. not only fails to teach or suggest applying a reference common voltage to a plurality of liquid crystal cells, Sugawara et al. fails to teach or suggest applying the signals ***during one display frame***, as recited in both independent claims 1 and 13. As stated previously, Sugawara et al. is based on the ***time for switching between display modes*** as indicated by the POWC signal from the judgment section 60. (*See* col. 7, ll. 20-24.) In other words, the timing of the application of the signals shown in FIG. 9 of Sugawara et al. is based on when the POWC signal has been detected, ***not*** based on the time periods related to ***one display***

frame, as recited in the claims of the present application.

Therefore, even if the Vcom=0V state shown in Sugawara et al. is a reference common voltage, *in arguendo*, there is no teaching in Sugawara et al. that would motivate one with ordinary skill in the art at the time of the invention to have applied the signals represented in FIG. 9 of Sugawara et al. during ***one display frame*** of Zavracky et al. There is no relation between the method of displaying pictures in one display frame as disclosed in Zavracky et al. with that of the control signals for switching between display modes as disclosed in Sugawara et al. Accordingly, Appellants assert that there is no motivation for one of ordinary skill in the art to modify the driving method of displaying an image of Zavracky et al. with control signals for switching over from one display mode to another as disclosed in FIG. 9 of Sugawara et al. in ***one display frame*** of Zavracky et al. when both references are silent as to such a feature.

# # # # #

CONCLUSION

In view of the foregoing, Appellants respectfully request the reversal of the rejections asserted in the Final Office Action and request allowance of all of the pending claims. If there are any fees due in connection with the filing of this Reply Brief, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. §1.136 not accounted for above, such an extension is requested and the fee should also be charged to our deposit account.

Respectfully submitted,

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Dated: October 24, 2006

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